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ABSTRACT BOOK

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TOWARDS BETTER HEALTHCARE

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The organizing committee would like to thank all participants for the abstracts submitted. However, due to time constraint, it was not possible for the Conference Abstract Editorial Board to edit the abstracts thoroughly. As such, the Conference Abstract Editorial Board is not responsible for any errors in the published abstracts.

CM-P- 3: EVALUATION OF DIFFERENT EXTRACTION METHOD FOR THE ISOLATION OF CETIRIZINE FROM HUMAN PLASMA FOR HPLC ANALYSIS

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Cetirizine is a second generation anti-histamin H1-receptor antagonist, used to treat cold or allergy. This drug is a white, crystalline powder, freely soluble in water, practically insoluble in acetone and in methylene chloride. Cetirizine is a non-sedating antihistamin because it crossed blood brain barrier slightly, reduces sedative side effect. In allergic inflammatory process, this drug influences the activities of eosinophils, neutrophils and platelets. It inhibits eosinophils in allergen-induced type I skin reaction and eosinophil chemotaxis in vitro by reducing the expression of ICAM-1 and soluble ICAM-1in epithelial cells. Malaysian government has implemented bioequivalence study for the registration of generic products and our study is in line with the regulatory requirement. Besides so far there is no report of such study on cetirizine in Malaysia. The study focused on the preliminary chromatographic detection and determination of cetirizine in human plasma. Different sample extraction process were evaluated namely protein precipitation and liquid-liquid extraction. In protein precipitation, two solvents were used; acetonitrile and chloroform and for liquid liquid extraction, dichloromethane and ethyl acetate with the various buffers were used. It was found protein precipitation using acetonitrile showed a better recovery (86%) compared to chloroform. For the liquid liquid extraction using dichloromethane the recovery was 80% while with the addition of buffer it did not show a good result. Liquid liquid extraction using dichloromethane with addition of sodium chloride showed 52% recovery. High Performance Liquid Chromatography (HPLC) was used for the analysis of the spiked plasma samples. The column used was a C18 column and mobile phase was combination of trietylamine and acetonitrile with the ratio of 65 : 35. Elution of cetirizine was detected with a UV-Vis detector at 232 nm wavelength.

Keywords: Cetirizine, Liquid-liquid extraction, Protein precipitation, HPLC